

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	09/931834	US-PGPUB; USPAT	OR	OFF	2004/11/17 09:11
L2	22348	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic)) or electrostatic\$4 or (electro adj static\$4)) same film	USPAT	OR	OFF	2004/11/17 09:16
L3	3136	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic)) or electrostatic\$4 or (electro adj static\$4)) near film	USPAT	OR	OFF	2004/11/17 09:16
L4	36	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic)) or electrostatic\$4 or (electro adj static\$4)) near film and "360"/\$.ccls.	USPAT	OR	OFF	2004/11/17 09:50
L5	11	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic)) or electrostatic\$4 or (electro adj static\$4)) near film same (therm\$7 temperat\$5) and "360"/\$.ccls.	USPAT	OR	OFF	2004/11/17 10:00
L6	393	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic)) or electrostatic\$4 or (electro adj static\$4)) near film same (therm\$7 temperat\$5) and (medium assembly media disk disc tape)	USPAT	OR	ON	2004/11/17 10:09
L7	289	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic)) or electrostatic\$4 or (electro adj static\$4)) near film same (therm\$7 temperat\$5) and (assembly disk disc tape)	USPAT	OR	ON	2004/11/17 10:24
L8	109	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic))) near film near5 (therm\$7 temperat\$5) and (assembly disk disc tape)	USPAT	OR	ON	2004/11/17 10:32

L9	1	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic))) near film near5 (therm\$7 temperat\$5) and (assembly disk disc tape)	JPO; DERWENT; IBM_TDB	OR	ON	2004/11/17 10:34
L10	151	(piezoelectric\$4 or (piezo adj electric\$4) or pzt or bimorph\$2 or bimetallic or (bi adj (morph\$2 or metallic))) near film near5 (therm\$7 temperat\$5) and (assembly disk disc tape)	US-PGPUB; USPAT	OR	ON	2004/11/17 10:35
S1	9	"360"/\$.ccls. and (writ\$5 record\$5) near10 coils near10 (temperature thermal\$5) near3 (sens\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/30 07:23
S2	9	"360"/\$.ccls. and (writ\$5 record\$5) near10 coils near15 (temperature thermal\$5) near3 (sens\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/30 07:24
S3	21	"360"/\$.ccls. and (writ\$5 record\$5) near10 coils same (temperature thermal\$5) near3 (sens\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/30 07:32
S4	7	"360"/\$.ccls. and (magnetooptical magneto-optical magnetooptocal (magneto near optical)) same (piezoelectric (air near bearing) electromagnetic) near actuator	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/30 07:34
S5	0	"360"/\$.ccls. and (magnetooptical magneto-optical magnetooptocal (magneto near optical)) same (piezoelectric and (air near bearing) and electromagnetic) near5 actuator	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/30 07:34
S6	1	"360"/\$.ccls. and (magnetooptical magneto-optical magnetooptocal (magneto near optical)) same (piezoelectric and electromagnetic) near5 actuator	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/30 07:35
S7	69	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) and controll\$5 near5 (power on)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/15 14:57

S8	12	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) and controll\$5 near10 (optical\$5) near5 (source head)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 19:44
S9	12	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) and controll\$5 near10 (optical\$5 magnetooptical\$5 (magneto near optical\$5) magneto-optical\$5) near5 (light laser)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 19:47
S10	6	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) and controll\$5 near10 (optical\$5 magnetooptical\$5 (magneto near optical\$5) magneto-optical\$5) near10 (light laser) and heat\$5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 19:57
S11	12	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) and controll\$5 near10 (optical\$5 magnetooptical\$5 (magneto near optical\$5) magneto-optical\$5) near10 (light laser)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:02
S12	69	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (thermocouple thermistor piezoelectric)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:04
S13	1	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (thermocouple and thermistor and piezoelectric)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:04
S14	6	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (thermocouple and thermistor)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:05
S15	0	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (piezoelectric and thermocouple)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:06
S16	0	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (piezoelectric and thermocouple)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:06

S17	1	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (piezoelectric and thermocouple)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:06
S18	1	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (piezoelectric and thermistor)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:07
S19	1	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (piezoelectric and thermistor)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:07
S20	1	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (piezoelectric and thermist)\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:07
S21	7	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (piezoelectric)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:08
S22	1	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) and (thermistor same piezoelectric)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:08
S23	2	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) and (thermocouple same piezoelectric)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:11
S24	149835	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) (piezoelectric)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:11
S25	4	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) near10 (piezoelectric)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:12
S26	25	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (record\$5 writ\$5) near10 coil	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:18

S27	17	"360"/\$.ccls. and (temperature thermal\$6) near3 (sens\$5 detect\$5) same (record\$5 writ\$5) near5 coil	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/29 20:18
S28	111	street and "360"/\$.ccls.	USPAT	OR	OFF	2003/10/29 20:36
S29	1	09/931834	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/06/04 12:31
S30	466	(temperature thermal\$5) near (sens\$5 detect\$5) and blackbody	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/06/04 12:35
S31	48	(temperature thermal\$5) near (sens\$5 detect\$5) and blackbody near (radiat\$5) and (disk disc)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:39
S32	105	(temperature thermal\$5) near (sens\$5 detect\$5) and blackbody near (radiat\$5) and (medium)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:39
S33	1	(temperature thermal\$5) near (sens\$5 detect\$5) and blackbody near (radiat\$5) and (medium near magnetic)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:40
S34	9	(temperature thermal\$5) near (sens\$5 detect\$5) and blackbody near (radiat\$5) and (medium near (magneto-optic\$5 optical\$5))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:44
S35	1	(temperature thermal\$5) near (sens\$5 detect\$5) and (piezoelectric near film) and (medium near (magneto-optic\$5 optical\$5))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:45
S36	31	(temperature thermal\$5) near (sens\$5 detect\$5) and (piezoelectric near film) and (disk disc)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:49

S37	88	(temperature thermal\$5) near (sens\$5 detect\$5) and (piezoelectric near5 head) and (disk disc)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:50
S38	285	(temperature thermal\$5) near (sens\$5 detect\$5) same (piezoelectric) and (disk disc)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:51
S39	81	(temperature thermal\$5) near (sens\$5 detect\$5) near10 (piezoelectric) and (disk disc)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/06/04 12:51
S40	5628	(piezo near electric\$5 piezoelectric\$5) near film	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/11/15 14:58
S42	285	(piezo near electric\$5 piezoelectric\$5) near film same (medium disk disc media assembly)	USPAT	OR	OFF	2004/11/17 09:11